lowa

Emerald Ash Borer

READINESS PLAN

[Updated: July 1, 2008]



Participating Agencies:

Iowa Department of Agriculture and Land Stewardship - State Entomologist Iowa Department of Natural Resources – Forestry Bureau

Iowa State University Extension

United States Department of Agriculture - Plant Protection Quarantine

United States Department of Agriculture - Forest Service

Iowa Emerald Ash Borer Readiness Plan

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Iowa Emerald Ash Borer Readiness Plan

Introduction

The emerald ash borer (EAB) is a new, significant threat to the urban and rural forests of Iowa. First identified 2002 in southeastern Michigan, this exotic beetle has destroyed millions of ash trees in Michigan, Ohio, Indiana, and Ontario, Canada. Recent discovery of EAB in western Pennsylvania, central West Virginia, and central Illinois is an indication of the ease of man-assisted movement of this pest. The ongoing, multiyear effort at one nursery site in Maryland is a good example of how difficult this pest is to eradicate. Federal quarantines are in place for the entire states of IL, IN and OH, and for portions of MI, MD, PA and WV, to limit unlawful spread of EAB to other states. Additionally, state regulatory agencies have established intrastate quarantines where EAB has been found.

EAB in low level populations is very difficult to find; many of the 'new' sites in infested states have been dated as occurring 3-5 years earlier from the official detection date. Although not detected during surveillance efforts from 2004 to 2007, EAB may already be in lowa and other 'uninfested' states as a result of movement of infested firewood, logs, nursery stock or other ash products.

Details on the identification, biology, hosts and symptoms of the EAB are provided in a Pest Alert by the United States Department of Agriculture Forest Service (*Appendix A* or http://www.na.fs.fed.us/spfo/pubs/pest_al/eab/eab.pdf). Although chemical and biological controls are under investigation, aggressive containment efforts are necessary for new outbreaks outside the core infestations.

It is estimated by the Iowa Department of Natural Resources - Forestry Bureau that approximately 15-20% of public trees in Iowa cities are green ash. In some communities, ash comprises more than 60% of the public trees. Statewide, there are over 50 million ash trees (green, white and black) in bottomland and upland forests (2005 USDA Forest Service, Forest Inventory Data) and another 30 million urban ash trees (Iowa Department of Natural Resources – Forestry Bureau).

The lowa Forest Insect & Disease Management Council (*Appendix B*) has been proactive in preventing EAB introduction into Iowa since 2004. In an effort to reduce the risk of accidental introduction, Iowa Department of Natural Resources – Forestry Bureau and Iowa Department of Agriculture and Land Stewardship – State Entomologist's Office established with the Iowa Nursery and Landscape Association a voluntary moratorium on importation of ash species landscape trees from sources east of the Mississippi River. In addition, stakeholders have encouraged consumers to reduce the use of ash species in Iowa's landscape through planting of other native tree species. DNR has suspended sale of ash stock at the State Forest Nursery. Nursery inspectors from the State Entomologist's Office include the EAB in their certified nursery stock grower and dealer inspections. The effort has also involved

matching federal-state funded visual surveys for EAB in Iowa and placement of trap trees in high risk public and private camping areas, as well as in state parks and forests in from 2004 through 2008 growing seasons.

The primary goal of this Readiness Plan is to prevent the introduction, establishment, and spread of EAB in lowa through science-based proactive actions including survey, import restriction, and public information. The lowa Forest Insect & Disease Management Council, however, realizes that EAB will eventually arrive in the state, and the secondary goal of this Plan is to identify the appropriate and effective response actions to be taken by state and federal agencies to contain EAB once detected in lowa.

Existing EAB efforts and programs were compiled, including current regional efforts and work from other states that serve as useful models. Examples of useful models:

- http://www.agr.state.il.us/Environment/Pest/emeraldashborer.pdf
- http://www.datcp.state.wi.us/arm/environment/insects/emerald-ash-borer/pdf/WI-EABResponsePlan.pdf

I. GENERAL READINESS:

To reduce risk, minimize impact, and respond more effectively to a possible infestation of the EAB and to partner towards overall health and sustainability of the forests, both urban and rural, throughout lowa.

A. Establish an executive council from a network of agencies and organizations that may be affected by EAB. This council will be made up of a *Technical Team* for prompt evaluation and action, and a *Communications Team* for providing uniform and accurate information and education. Use the existing network of the lowa Forest Insect & Disease Management Council to draft a readiness plan, as well as to advise, advocate and lead in the implementation of the plan.

The following agencies have, by law, been assigned the responsibility of managing an exotic pest infestation and have been granted the legal authority to act by the federal, state, or local government.

- Iowa Department of Agriculture and Land Stewardship (IDALS) [code of Iowa, chapter 177A and IAC chapter 46]
- Iowa Department of Natural Resources (IDNR) Forestry Bureau [code of Iowa, Title 10 and chapter 456A.24]
- USDA Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ)
- Affected local government(s) at site(s) of infestation
- 1. <u>Technical Team</u> Lead in monitoring, confirmation, quarantine establishment, and containment efforts to limit EAB infestations.
 - IDALS State Entomologist Office [Co-Lead Organization]
 - IDNR Forestry Bureau [Co-Lead Organization]
 - Iowa State University Extension (ISUE)
 - USDA APHIS PPQ (PPQ)
 - USDA Forest Service (FS)
 - Iowa Emergency Management Division
 - Local Government
- 2. <u>Communication Team</u> Lead in communicating accurate information, quickly and broadly in a manner that supports the *Technical Team* to prevent and contain EAB infestations.
 - lowa State University Extension [Lead Organization]
 - IDALS State Entomologist's Office & IDALS Communication Officer
 - IDNR Forestry Bureau
 - USDA APHIS PPQ
 - USDA FS
 - Iowa State University
 - Iowa Arborist Association (IAA)
 - Iowa Nurseryman and Landscape Association (INLA)

- Iowa Association of County Conservation Boards (IACCB)
- Iowa League of Cities (ILC)
- Governor's Representative, State of Iowa
- Iowa State Association of Counties (ISAC)
- Iowa Society of American Foresters (SAF)
- Iowa Environmental Council (IEC)
- Meskwaki Natural Resources
- B. Administrative Readiness to assure that current, relevant, and achievable policies are in place that allow the actions described in this plan to occur quickly and unencumbered [*Technical Team*, except as noted].
- 1. Revise EAB Readiness Plan.
 - a) Revise as needed and distribute revisions to readiness team
 - b) Readiness Team members to distribute condensed plan to constituencies
 - c) Foster cooperation among agencies for implementation
- 2. Identify resources and needs.
 - a) Evaluate staffing needs in regulatory agencies
 - b) Establish and refine EAB detection program of sentinel trees
 - c) Establish and refine EAB detection program of panel traps
 - d) Monitor nursery field operations
 - e) Investigate and eliminate out of state ash firewood movement into lowa
 - f) Seek federal and state resources of funding for readiness activities
 - g) Assess human and technical resources (e.g. tree climbers)
- 3. Take proactive steps to speed administrative processes.
 - a) Analyze IDALS & IDNR procedures to identify streamlining opportunities
 - b) Encourage local community tree inventories to determine the number and location of ash trees. Encourage communities to remove declining ash trees.
 - c) Communicate EAB status to Iowa Homeland Security and Emergency Management
 - d) Encourage communities to examine local administrative processes for streamlining opportunities
- 4. Educate the media to assure accuracy of information [Communications Team].
 - a) Issue a press release on this EAB Response Plan
 - b) Coordinate Public Information Officers from communications team
 - c) Identify key sources of current information
 - d) Develop/distribute current EAB information to primary public and private campgrounds and roadside rest areas
- 5. Determine locations of infested tree dump sites and explore wood waste utilization opportunities with *IDNR Waste Management Bureau* to reclaim ash material to its highest possible use should a volume of infested ash wood suddenly become available.

- C. Technical Readiness to assure that policy decisions, actions, and education initiatives are guided by the best and most current science [*Technical Team*].
- 1. Review and distribute scientific guidelines for decision making.
 - USDA FS or USDA PPQ publications on EAB
 - Michigan State University, Purdue University, Ohio State University or other university control recommendations (preventive and remedial chemical tools; biological control tools)
- 2. When issued, operate under New Pest Response Guidelines (*Appendix C*) or other relevant *USDA* technical guidelines.
- 3. Advocate for continued research for greater understanding of EAB and management options.
- 4. Participate in annual and/or regional forest pest meetings.
- 5. Transfer technology to field foresters, arborists, landscape architects, and nursery professionals as it becomes available.
- 6. Capture and management of global information system data for surveillance activities.

II. REDUCE RISK OF INFESTATION:

To assure that all means of EAB introduction are known and contained, as soon as possible.

- A. Assess Risk Determine the size and scope of the ash resources within Iowa forests and urban areas and determine the severity of new and existing EAB infestations [*Technical Team*].
- 1. Identify possible sources of EAB importation (i.e., ash logs, firewood, and nursery stock) from coming into lowa through public awareness and enforcement of federal quarantine on ash articles from infested states.
- 2. Assess the scope of the resource at risk (number of ash trees) in urban areas through expanded community tree inventories of cities near major interstate and other transportation routes.
- 3. Analyze density of ash populations using USDA FS forest inventory data to determine high risk ash forested areas.
- 4. Track spread of current EAB discoveries in neighboring states and distribute to *Communications Team.*
- B. Reduce Risk [Communications Team, except as noted]
- 1. Raise public awareness on risk from firewood importation.
 - a) Install educational posters at federal, state, county and large private campgrounds and highway rest areas along interstate and other major highways
 - b) Utilize media sources (billboards, hunting magazines, etc.) to encourage visitors to leave their firewood at home
 - c) Promote "EAB-free" firewood from reputable firewood dealers
 - d) Encourage local firewood concessionaires near or in public and private park camping areas
 - e) Include statement about EAB in campsite registration (paper and on on-line)
- 2. Convene a Firewood Committee to analyze the firewood market and find ways to reduce the risk of importation with representatives from: [*Technical Team*]
 - IDNR
 - USDA PPQ
 - IDALS
 - IAA
 - IACCB
 - Iowa Woodland Owners Association
 - Iowa Department of Economic Development Tourism

- 3. Educate industries about risk of ash importation.
 - a) Reach out to wood products manufacturers through *IDNR*'s licensed timber buyers and the *Iowa Woodland Owners Association*
 - b) Educate contractors and municipalities about the importance of knowing the source of ash trees and assure they are *IDALS* inspected
 - c) Educate garden centers to no longer offer ash trees for sale
 - d) Educate firewood dealers about EAB risk
 - e) Reach out to trucking associations to help track movement of ash
- 4. Assure full and thorough analysis of ash nursery stock movement and effective inspection of current ash stock [*Technical Team*].
 - a) Advocate for strong state support of nursery inspection program
 - b) Track nursery stock importation in recent past
 - c) Review trace-back program for nursery shipping records from infested states
 - d) Strengthen and maintain the INLA voluntary ash moratorium
 - e) Advocate for increased production in state of non-ash nursery stock
- 5. Assure planting selections contribute to a diverse and sustainable urban forest.
 - a) Educate municipalities and large property managers about diversity in planting
 - b) Assist local governments in tree assessments and inventories to analyze diversity and guide planting decisions
- 6. Seek legislative support to reduce risk [Technical Team].
 - a. To expand EAB detection efforts
 - b. Assure lowa's control efforts are well supported
 - c. Advocate for readiness funding from stakeholders (e.g., ISAC, IEC, ILC)
 - d. Advise federal and state elected officials of the hardship of the current limited federal and state funding to minimize EAB impacts
- 7. Investigate the development and implementation of using zip codes of out-of-state outdoor sports participants and campers to trace infested materials movement into federal, state, and private campgrounds [*Technical Team*].

III. ONGOING MONITORING PROGRAM:

To minimize the spread and improve odds of containing an infestation

- A. Expand surveys of urban forest and campground ash populations along interstate and other major highways to find or rule out the presence of EAB following *USDA FS-Forest Health Protection and USDA PPQ* survey protocols [*Technical Team*, except as noted].
- Expand federal and state detection surveys.
- 2. Convene *Technical Team* to survey and monitor ash populations to determine the presence of the EAB including representatives from:
 - IDALS
 - IDNR
 - ISUE
 - USDA PPQ
 - IACCB
 - Iowa arboreta (e.g. Arie den Boer, Bickelhaupt, Brenton, Cedar Valley, Crapo Park, Dubuque, Iowa, Van der Veer)
 - Iowa Parks & Recreation Association
- 3. Enable municipal and commercial green industry professionals to participate in monitoring and reporting.
- 4. Communicate survey results to stakeholders and the media, including an informational Web site [Communications Team].
- B. Educate the public and professionals to provide stakeholders with current and accurate information in a targeted manner to aid in rapid identification of symptoms of an infestation [Communications Team, except as noted].
- 1. Offer training and outreach based on current information to landscapers, arborists, Master Gardeners, nurserymen, appropriate municipal workers, and other green industry workers to assess ash health and accurately identify EAB.
- 2. Educate the general public about EAB.
 - a) Secure/develop simple educational materials for the general public
 - b) Pursue opportunities for speaking, educating, and exhibiting educational displays including EAB identification material
 - c) Broadly distribute public education materials
- 3. Recruit and enable volunteer scouting [Technical Team].
 - a) Promote awareness through the media with regular press releases and public appeals for help in scouting

- b) Prepare kits to support volunteer scouting by both individuals and groups (e.g. ISUE Master Gardeners, Master Woodland Managers, and Community Tree Stewards)
- C. Coordinate state and national information to address professional and public inquiries from lowa and foster cooperation and communication [Communications Team, except as noted].
- 1. *All Team* members are requested to link to USFS, PPQ and Web sites in quarantined states.
- 2. Coordinate with http://www.emeraldashborer.info/ to add Iowa information.
- 3. Support full staffing of regulatory agencies so that vital information about lowa forest health is readily available [*Technical Team*].
- D. Guide public inquiries and possible sightings through the following process for the most effective use of resources and quickest response [*Technical Team*].
- E. Guide professional (arborist, entomologist, pathologist, plant health care specialist) inquiries and possible sightings through the following process:
- 1. If a suspected EAB is found, contact:

IDALS (515) 725-1470 or USDA-PPQ (515) 285-7044

Personnel from these agencies will inspect the suspected ash tree(s) and identify the specimen(s). Tree(s) will be retained for possible dissection by a dendrochronologist.

2. Collected specimen will be sent or delivered to the *State Entomologist's Office* or lowa's *USDA-PPQ office*, who will then forward the specimen to a *PPQ identifier*.

STATE ENTOMOLOGIST'S OFFICE 2230 South Ankeny Boulevard Ankeny, IA 50023 (515) 725-1470 USDA-APHIS-PPQ 6000 Fleur Drive Des Moines, IA 50321 (515) 285-7044

- 3. If collected specimen is initially confirmed to be EAB by a *PPQ Identifier*, the specimen will then be sent to the National Systematic Entomology Laboratory to make final identification.
- 4. All *Technical Team* Members are notified that a suspect EAB is in the system for identification. **However, at this point, all information is NOT for public dissemination.**

5. The result from the Systematic Entomology Laboratory, either positive or negative for EAB, is received by *PPQ-Des Moines*, who will notify the *Technical and* Communications Teams.

IV. IN THE EVENT OF AN INFESTATION, CONTAIN AND MANAGE THE EAB POPULATION:

The *Technical Team*, with cooperation of the affected local government(s), will implement coordinated efforts to contain the infestation according to New Pest Response Guidelines established by *USDA* (see Appendix C) or from research conducted by state or federal agencies.

A. Lead in planning and implementing actions [Technical Team, except as noted].

- 1. Begin response with affected county and city government(s).
 - a) Meet to discuss and determine the preliminary plan of action
 - b) Schedule an emergency meeting with cooperators (e.g. regulated industries, local government, recreational areas, and Tribal representatives)
 - c) Release verified, accurate information to the press [Communications Team]
- 2. Organize, initiate and conduct a delimiting survey to determine the outer boundary of the infestation.
 - a) In an urban setting, trees within 2 miles of positive find will be assessed for EAB activity within a reasonable time frame
 - b) In a woodland setting, all ash trees within 2 miles of a positive find will be surveyed and then EAB activity will be determined
 - c) If additional EAB detection is found in any area, and expanded survey will be initiated within 2 miles from the new find
- 3. *IDALS* places into effect an EAB State Interior Quarantine regulating all potential host material (ash wood and ash wood products) within the quarantined area as determined by the delimiting survey. The minimal quarantined area will be at the township level. This would include the "declaration of all plants and part thereof infested with the EAB as a nuisance in the State of Iowa" as well as the establishment of a formal quarantine of the infested area(s).
 - a) A federal quarantine regulating interstate movement will be initiated by *PPQ* following state quarantine guidelines
 - b) Release accurate information to the press [Communications Team]
- 4. Regulatory and control activities will be initiated as necessary.
 - a) Administer provisional quarantine established by *IDALS* consistent with Code of Iowa, Chapter 177A. Emergency rules will be issued.
 - b) Removal and disposal of all public and private ash trees as determined to be feasible.
 - c) Develop and adopt compliance agreement(s) with stakeholders in cooperation of quarantines (see *Appendix D*)
 - d) Establish sentinel trees and/or sticky traps along delimitation boundaries

- B. Communicate and coordinate actions, information and response [Communications Team, except where noted].
- 1. Provide accurate information and updates to the media.
- 2. Provide accurate information to affected residents.
 - a) Prepare information for customizing and distributing to affected area immediately after infestation is found
 - b) Cooperate with local governments to host local resident / land owner meetings to share information as soon as possible after finding an infestation [*Technical Team*].
- 3. Communicate with public and industry professionals to foster cooperation to maximize effective response.
- 4. Communicate containment success stories.
- C. Dispose of wood debris in cooperation with *IDNR Waste Management Bureau* and local governments [*Technical Team*].
 - a) Establish processing facilities in the quarantine zones to efficiently handle ash debris and reclaim useable products as best as possible
 - b) Market reclaimed wood products
- D. Develop and investigate the implementation of a reforestation program authorized under applicable federal, state and local authorities using available resources [*Technical Team*].

V. IN THE EVENT THAT THE EAB CANNOT BE CONTAINED IN IOWA:

Pursue, with cooperation from affected local government(s), the following items if the EAB population cannot be contained [*Technical Team*, except as noted]:

- A. Response for woodlands and forests
- 1. Develop and distribute [Communications Team] silvicultural guidelines.
- 2. Local market utilization will be examined and encouraged.
- 3. Quarantine and compliance agreements will be developed and maintained to restrict movement from EAB infested area(s).
- B. Response to cities and local governments
- 1. Municipalities will review their ordinances and appropriate recommendations made.
- 2. Local response plans will be developed in cooperation with local officials.
- 3. Training programs will be offered to local governmental staff [Communications Team].
- C. Response for residential concerns [Communications Team]
- 1. Develop and distribute factual information (print media, Web, public service announcements, etc.) for homeowners.
- 2. Conduct annual training for arborists, landscape professionals, and other green industry personnel to keep this service-related business sector informed of effective containment / management efforts for EAB.
- D. Seek legislative support to cover costs associated with EAB
- 1. Active participation from Governor's Representative.
- 2. Advocate for matching funds at state and federal levels to assist local government(s) in cleanup efforts.
- 3. Advocate for readiness funding from stakeholders.

Appendix A:

USDA Forest Service Pest Alert: Emerald Ash Borer

[http://www.na.fs.fed.us/spfo/pubs/pest_al/eab/eab.pdf]

Appendix B:

Iowa Forest Insect & Disease Management Council Members

- Iowa Arborists Association
- Iowa Association of County Conservation Boards
- Iowa Department of Agriculture and Land Stewardship State Entomologist's Office
- Iowa Department of Natural Resources Forestry Bureau
- Iowa Horticulture Society
- Iowa Nursery & Landscape Association
- Iowa State University, Departments of Entomology, Horticulture, Natural Resources Ecology and Management, and Plant Pathology
- Iowa State University Extension
- United States Army Corps of Engineers
- United States Department of Agriculture Animal Plant Health Inspection Service – Plant Protection and Quarantine
- United States Department of Agriculture Forest Service
- United States Department of Agriculture Natural Resources Conservation Service

Appendix C: New Pest Response Guidelines: Emerald Ash Borer, *Agrilus planipennis* (Fairmaire)

[http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/D raft-NPRG.pdf]

Appendix D:

USDA APHIS PPQ Compliance Agreement: Emerald Ash Borer

[Current compliance agreements available at:

http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/regulatory.shtml]

Appendix E:

Action Checklist if Emerald Ash Borer Suspected or Found

Checklist

I. Suspected EAB specimen

- 1. If a suspected EAB is found, contact *IDALS* (515) 725-1470 <u>or</u> *PPQ* (515) 285-7044. Agency personnel will inspect the suspected ash tree(s) and identify the specimen(s). Tree(s) will be retained for possible dissection by a dendrochronologist.
- 2. Collected specimen will be sent or delivered to the *State Entomologist* [(515) 725-1470] or USDA-PPQ [(515) 285-7044)], who will then forward the specimen to a *PPQ identifier*.
- 3. If collected specimen is initially confirmed to be EAB by a *PPQ Identifier*, the specimen will then be sent to the National Systematic Entomology Laboratory to make final identification.
- 4. All Technical Team Members are notified that a suspect EAB is in the system for identification. However, at this point, all information is NOT for public dissemination.
- 5. The result from the Systematic Entomology Laboratory, either positive or negative for EAB, is received by PPQ-Des Moines, who will notify the *Technical and Communications Teams*.

II. EAB Found in Iowa

The *Technical Team*, with cooperation of the affected local government(s), will implement coordinated efforts to contain the infestation according to New Pest Response Guidelines established by *USDA* or from research conducted by state or federal agencies.

- A. Lead in planning and implementing actions [Technical Team, except as noted].
- 1. Begin response with affected county and city government(s)
 - a) Meet to discuss and determine the preliminary plan of action
 - b) Schedule an emergency meeting will be scheduled with cooperators (e.g. regulated industries, local government, recreational areas and Tribal representatives)
 - c) Release verified, accurate information to the press [Communications Team]
- 2. Organize, initiate and conduct a delimiting survey to determine the outer boundary of the infestation.
 - a) In an urban setting, trees within 2 miles of a positive find will be assessed for EAB activity within a reasonable time frame.
 - b) In a woodland setting, all ash trees within 2 miles of a positive find will be surveyed and then EAB activity will be determined.
 - c) If additional EAB detection is found in any area, and expanded survey will be initiated within 2 miles from the new find.
- 3. *IDALS* places into effect an EAB State Interior Quarantine regulating all potential host material (ash wood and ash wood products) within the quarantined area as determined by the delimiting survey. The minimal quarantined area will be at the township level. This would include the "declaration of all plants and part thereof infested with the EAB as a

nuisance in the State of Iowa" as well as the establishment of a formal quarantine of the infested area (s).

- a) A federal quarantine regulating interstate movement will be initiated by PPQ following state quarantine guidelines
- b) Release accurate information to the press [Communications Team]
- 4. Regulatory and control activities will be initiated as necessary.
 - a) Administer provisional quarantine established by *IDALS* consistent with Code of Iowa, Chapter 177A. Emergency rules will be issued.
 - b) Removal and disposal of all public and private ash trees as determined to be feasible.
 - Develop and adopt compliance agreement(s) with stakeholders in cooperation of quarantines
 - d) Establish sentinel trees and/or panel traps along delimitation boundaries
- B. Communicate and coordinate actions, information and response [Communications Team, except as noted]
- 1. Provide accurate information and updates to the media
- 2. Provide accurate information to affected residents
 - a) Prepare information for customizing and distributing to affected area immediately after infestation is found
 - b) Cooperate with local governments to host local resident / land owner meetings to share information as soon as possible after finding an infestation [*Technical Team*].
- 3. Communicate with public and industry professionals to foster cooperation to maximize effective response
- 4. Communicate containment success stories
- C. Dispose of wood debris in cooperation with *IDNR Waste Management Bureau* and local governments [*Technical Team*]
 - a) Establish processing facilities in the quarantine zones to efficiently handle ash debris and reclaim useable products as best as possible
 - b) Market reclaimed wood products
- D. Develop and investigate the implementation of a reforestation program authorized under applicable federal, state and local authorities using available resources [Technical Team]

Appendix F:

Sample Submission for Suspected Emerald Ash Borer

Submitting a potential Emerald Ash Borer sample

- 1. Complete the form on the reverse side to the best of your ability. Give complete information pertinent to the sample, including background information.
- 2. Send as many insect specimens as possible.
- 3. Place insect specimen in glass vial containing the alcohol-gel sanitizer. Gently push the specimen down into the gel with a pencil. Tightly close the vial with the screw cap.
- 4. If sending multiple site samples, fill out the submission form for each sample and put specimens from different sites in different vials. Label vials accordingly.
- 5. Place the vial in bubble wrap, packing foam, or shredded paper to cushion during shipment.
- 6. If sending damaged wood, you will need to send as much of the material as possible.
- 7. Ship in crush-proof container immediately soon after collecting. Send to:

STATE ENTOMOLOGIST'S OFFICE OR
2230 South Ankeny Boulevard
Ankeny, IA 50023

USDA-APHIS-PPQ 6000 Fleur Drive Des Moines, IA 50321

Sample Submission Form for Suspected Emerald Ash Borer

Client Name: Client Address: Client County: Client Daytime Phone: Client Email Address: Date Collected: Collection Location Details:	Submitter Name:			
	Submitter Address:			
	Submitter Affiliation: Submitter Daytime Phone:			
				_
	Number of Ash Trees Affected:		_	
	Type of Ash Tree:			
Emerald Ash Borer Symptoms Present:	Epicormic sprouting			
	Crown dieback			
	S-shaped larval tunnels			
	D-shaped exit holes			
For Office Use:				
Date Received:	Tentative Identification by:			